

hamtronics, inc.

182 BELMONT RD., ROCHESTER, NY 14612

BULK RATE
U S Postage Paid
Rochester, NY
Permit #490

Mr. D. Hill, Jr.
4057 S. Lind Drive
Kingsport, TENN 37664



EVER WISH YOUR RECEIVER COULD HEAR THE WEAK ONES?

Almost every amateur and commercial VHF/UHF Receiver can be more sensitive with these popular preamps. Over 8000 in use throughout the world! You may hear stations others don't know are there.



P8 MINIATURE PREAMP

(for mounting in tight spaces)

- Cascode circuit with 2 j-fets
- No neutralization required
- Simply peak coils to align
- Only 1/2 x 2-3/8 inches
- Easy to install — merely connect in receive coax line
- 20-25 dB gain
- 2.5 dB nominal noise figure
- Build up for any band — available in models for 20-230 MHz
- Improves new sets and old!
- Good for fm, ssb, cw, am
- 6 dB bandwidth = 3% of center frequency
- Operates on 9-14 Vdc/15 mA
- 50 Ohms in/out impedance
- Connect miniature coax from above or below by soldering to pads provided on board
- Featured in Jan 73 Ham Radio Magazine article

Prices:

- P8 Preamp Kit \$10.95
- P8-LO for any band 20-83 MHz
- P8-HI for any band 83-190 MHz
- P8-220 for 220-230 MHz
- P16 Wired and Tested Preamp (Spec. oper. freq.) \$21.95
- A roll of subminiature coax is available for making connections to receiver \$1.00

Satisfied owners say:

"I installed one of the kits in an HR-2, and the reception has increased 100%. These are truly nice little units. In a low band scanner, I installed one, and the increase in signal has been outstanding. It is nice to see a product such as yours."

- J. V.; Boston, MA

"I put together 3 preamps and used them in the following equipment:

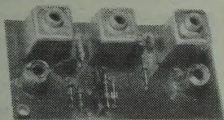
#1 went into a pocket scanner — was more sensitive than an HR-2B.

#2 went into my friend's HR-2B — what a fantastic difference!

#3 went into my repeater — extended coverage a good 8 miles."

-T. C.; Wallingford, CT

VHF RECEIVER PREAMPS



P9 DELUXE PREAMP

(This model recommended wherever space permits)

- Two stage rf amplifier ckt
- 20-25 dB gain
- 2 dB nominal noise figure
- Available in models for 26-230 MHz
- 6 dB bandwidth = 2% of center frequency
- Premium grounded gate j-fet's
- 50 ohms in/out impedance
- Connectors for coax cables
- No neutralization required
- Diode transient & overload protection
- Well shielded tuned circuits
- Operates on 9-14 Vdc/20 mA

- Only 1-1/2 x 3 inches
- Easy to build and align — merely peak coils
- Featured in Dec 1976 issue of Two Way Radio Dealer Mag.

PRICES:

- P9 Preamp Kit \$12.95
 - P9-LO for any band 26-88MHz
 - P9-HI for any band 88-172MHz (Coil winding determines band)
 - P9-220 for bands 172-230 MHz
 - P14 Wired and Tested Preamp \$24.95
- (Specify operating frequency)

Look at what users have to say:

"A P9-220 has been doing a great job on our repeater for several months."

- D. S.; W. Hartford, CT

"The two preamps I purchased previously work great!"

- J. M.; Peterborough, NH

"Real nice preamp. Would recommend it. Tnx for fast reply."

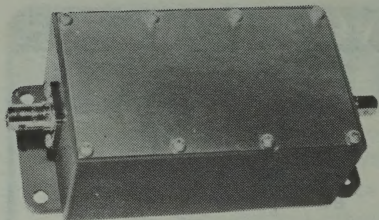
- J. S.; FPO New York

"Using P9 in repeater on 'intermod hill'. No intermod to our surprise, signals are great, range of repeater extended to 150 miles now."

- R. S.; Nanticoke, PA

"Preamp works great!! Thanks."

- R.B.; Chester, NJ



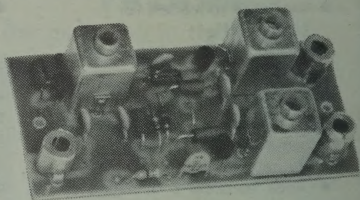
Price of the P45 wired/tested \$44.95

P45 VHF Preamp

For applications requiring a pre-amp housed separately, the P45 is the answer. A P14 premium preamplifier in an attractive, yet rugged, die cast aluminum box with BNC connectors. The 2-3/4 H x 4-1/4 W x 1-3/4 D inch case is finished in durable blue epoxy enamel and has flanges for mounting. Other characteristics same as P9/P14.

P13 VHF Receiver Multicoupler

ONE ANTENNA FEEDS
TWO RECEIVERS



Ever wish you had a good way to use one antenna to feed two receivers? Now you do! The P13 Receiver Multicoupler unit provides low-noise gain and power splitting to drive two receiver inputs from one antenna. It is patterned after the popular P9 VHF Preamp Unit.

The P13 gives about 15 dB gain in each of the two output channels. If desired, the outputs can be on different parts of the band, with some reduction in gain. E.g., it can drive a two meter receiver and a high band unit. Phono jacks supply connections to the antenna and the two receivers. Standard models are available for any segment of the

26-230 MHz vhf range. Size is 1-1/2 x 3-1/4 inches. Operating power is 13.6 Vdc at 30 mA.

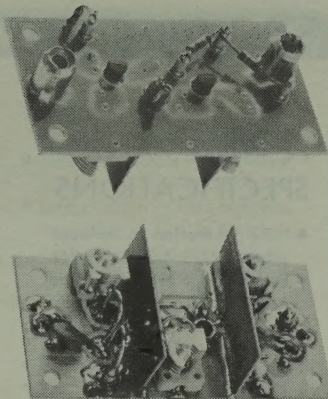
PRICES:

- P13 Receiver Multicoupler Kit\$15.95
- P13-LO for any band 20-88 MHz
- P13-HI for any band 88-230 MHz (coil winding determines band)
- P24 Wired and tested Multicoupler.....\$29.95 (specify operating frequency)
- P50 Wired unit in die cast box with BNC connectors, similar to P45 above..... \$49.95

P15 UHF PREAMP

It's like getting a whole new receiver!

- 2 grounded gate stages with J308 super j-fet
- 20 dB gain
- 5 dB typical noise figure
- 50 ohms in/out
- Also adaptable to 75 ohms
- Can be built for any 6 MHz segment of 380-520 MHz range merely by changing coil size
- Only 1-1/2 x 3 inches
- Great for fm, atv, ssb, or cw
- Transient protected
- All quality components
- Connectors for coax cables
- Featured in July 1975 Ham Radio Magazine article



PRICES:

P15 UHF Preamp Kit	\$18.95
P35 Wired/Tested Preamp	34.95

We like to hear from customers. ATV'ers especially are very critical in evaluating uhf gear. Here's what a few have had to say:

"Just a note to tell you how nice your 3/4 meter preamp works on ATV. I installed one with dual coax relays at the antenna. The net result was a solid 8 dB improvement on weak signals. Smooth adjustment, no sign of oscillation, and ease of construction make this item a real buy for the money."

- S.E.; Galion, OH

"Using the converter and preamp for 438 MHz ATV. Working fine business!"

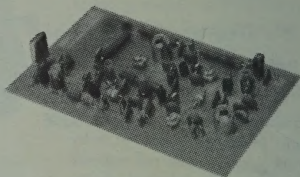
- J. V.; Santa Clara, CA

NEW

UHF RECEIVING CONVERTERS

FEATURES AND SPECIFICATIONS

- New generation — replaces popular U20-450 Converter
- Latest design — uses printed hairpin coils, miniature ceramic trimmers, high Q slug tuned vhf coils, and ferrite bead decoupling
- Great for ssb, fm, am, oscar
- Built-in detectors for easy alignment using only VTVM
- Can be used on any band in 380-520 MHz range
- 10 dB gain
- Less than 0.5 uV sensitivity with average receiver
- All other features same as vhf converter on p. 9



<u>Model</u>	<u>RF Range</u>	<u>IF Range</u>
C432-2	432-434	28-30
C432-5	435-437	28-30
C432-9	439.25	61.25
Special	Other RF & IF ranges available on request	

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 PRICES: (including crystal)

C432 UHF Converter Kit...

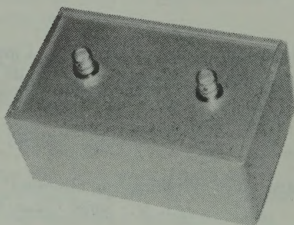
..... \$34.95

C432 Converter, Wired and

Tested..... \$54.95

CASE FOR VHF AND UHF CONVERTERS

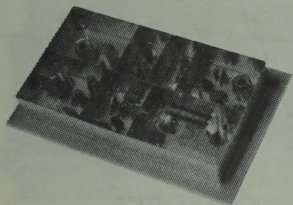
Model A9 Case Kit \$12.95



- Extruded box with brushed aluminum finish
- Top panel machined for connectors
- Converter board slides into extruded grooves
- BNC jacks for rf in & out
- Phono plugs and cable for connection to converter bd
- Size 2-7/8 x 4-5/8 x 2 inches

NEW

VHF RECEIVING CONVERTERS



SPECIFICATIONS

Gain: 20 dB

Sensitivity: Less than 0.3 μ V on average receiver

Bandwidth: Greater than 2 MHz without retuning

Impedance: 50 ohms

Input/Output Termination: RCA connectors

Operating Power: +13.6 Vdc/30 mA

Size: 2-3/4 x 4-1/2 x 1 inches

FEATURES

- New generation — replaces popular C25 series converters
- Latest design — uses new easy to wind high Q slug tuned coils with optimum coupling, ferrite bead decoupling, and compartmentized shielding
- Low noise front end
- Great for ssb, cw, fm, oscar!
- Easy construction and alignment
- Built-in detector circuits for simple injection chain tuning
- Only test equipment needed is vtvm and strong signal source
- Stable, grounded gate fet amplifier and fet mixer
- Double tuned circuits
- Can be modified easily to cover a wide range of RF & IF frequencies, including commercial bands
- Crystals can be switched to cover multiple band segments if desired
- Protected against power line transients



Model	RF Range	IF Range
C50	50-52	28-30
C144	144-146	28-30
C145	145-147	28-30
C146	146-148	28-30
C220	p/o 220-230	28-30
C110	p/o 108-130	28-30
Special	Other RF & IF ranges available on special order	

PRICES: (including crystal)

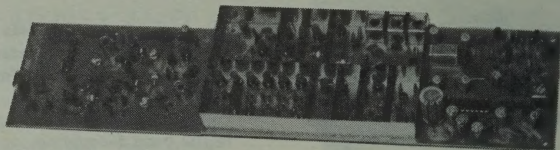
VHF Converter Kit \$34.95

VHF Converter, Wired and

Tested \$54.95

NEW

R90 UHF FM Receiver



SPECIFICATIONS

Sensitivity: Less than 0.8 μV for
20 dB quieting

Squelch Sensitivity: Less than
0.5 μV

Frequency Range: Any 2 MHz
segment 380-520 MHz

Image Rejection: 60 dB

Operating Power: 13.6 Vdc at
120-190 mA

Size: UHF unit 2-3/4 x 4-1/2
IF unit 3 x 7-1/2 x 1 in.

FEATURES

- New generation — replaces popular R95 series receivers at lower cost
- Comprises C432 UHF Converter Module (p. 8) and R70 VHF Receiver Module (p. 11)
- Triple conversion for good image rejection
- 6 channels at no extra cost
- Other features same as R70 Receiver and C432 Converter

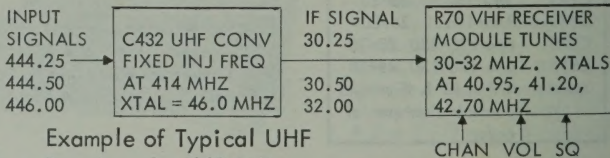
PRICES:

R90 UHF Receiver Kit \$89.95

R90 Modules Wired/Tested \$199.95

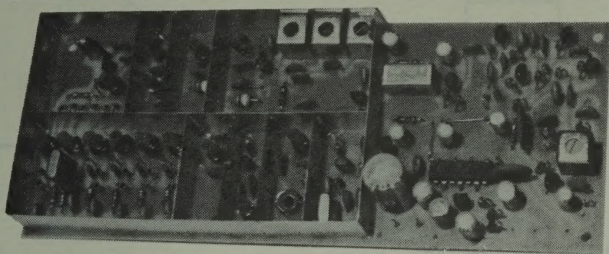
Optional Crystal Filter Kit \$10.00

Crystals: Need one for UHF Conv & up to 6 for IF unit...\$5.95 ea (We'll gladly order crystals for any frequency scheme you wish)



NEW

R70 VHF FM Receiver



FEATURES

- New generation — replaces popular R60 series at lower system price
- 6 channels, diode switched with individual multi-turn trimmers — no adapters needed
- Latest design — new easy to wind high-Q slug tuned coils, optimum coupled double-tuned circuits, ferrite bead decoupling, compartmentized shielding
- Low noise fet front end
- Much better selectivity than sets with only 2 or 4 pole crystal filter
- Transient protected and voltage regulated front end
- Need only squelch & volume controls & speaker to complete
- Easy to build & align; built-in test circuits for alignment with only signal gen. & vtm
- Positive acting noise squelch
- Can be tuned to CAP, MARS
- Easily modified for com'l bands
- Designed to fit A25 Cabinet

SPECIFICATIONS

Sensitivity: Less than 0.4 μ V
 IF's: 10.7 MHz & 455 kHz
 Filter: ceramic filter standard, optional additional crystal filter
 Selectivity: 70-80 dB standard, over 100 dB with xtal filter opt.
 Image Rejection: 60 dB
 Bandwidth: ± 7.5 kHz
 Audio Output: 2 Watts
 Operating Power: 13.6 Vdc at 90-150 mA
 Size: 3 x 7-1/2 x 1 inches

MODELS:

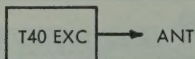
R70-28	10 Meters
R70-50	6 Meters
R70-146	2 Meters
R70-220	220 MHz

Other frequencies on special order

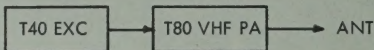
PRICES:

R70 VHF Receiver Module	
Kit	\$ 69.95
Wired & Tested	\$139.95
Optional Crystal Filter Kit	\$10
Crystals	\$5.95

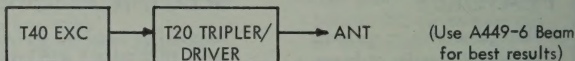
Ideas for FM Transmitter Modules.....



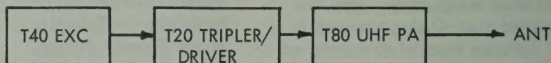
150 MW QRP 2M OR 6M RIG OR 80 MW 220 MHZ RIG — IDEAL FOR SECONDARY RIG TO OPERATE REPEATERS OR AS LINK, ETC.



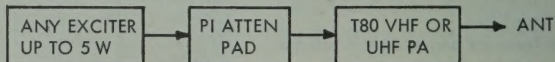
20-25W TWO METER RIG



150-200 MW 450 MHZ RIG — IDEAL AS REPEATER CONTROL LINK, LOCAL REPEATER INPUT RIG, ETC.



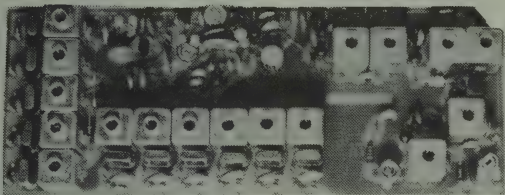
13-15 W UHF RIG



hamtronics, inc.

182 BELMONT RD., ROCHESTER, NY 14612

T40 VHF FM EXCITER ★



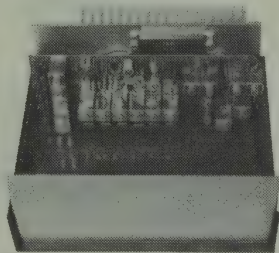
- Use on 2M, 6M, or com'l freq
- 2 MHz spread without retuning
- Uses readily avail 12 MHz xtals
- Adjustable output up to 200 mW
- Use carbon or xstr dynamic mic
- High quality phase modulator, audio shaping and filtering provide great sounding audio
- Phase modulator allows use of synthesizers
- Separate mic gain and deviation controls for precise setup
- Valued throughout the country as repeater building block
- Shielded slug-tuned coils and optimum coupled double tuned circuits suppress spurs
- 11 channels, diode switching and individual xtal trimmers
- Easy to build and align — built in test points for alignment
- Can be tuned for MARS or CAP
- Use on cw for OSCAR
- 50 ohm output — RCA jack
- Operates on 13.6 Vdc/90 mA

- 3 x 7-1/2 in. G10 pc board
- Designed to fit A25 Cabinet
- Use with T20 Tripler for uhf

PRICES:

T40 Exciter Module Kit \$39.95
(Specify band)

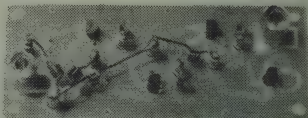
T40 Exciter Wired/tested \$89.95
Crystals \$5.95 ea (We stock common freq and gladly order others)



T20 UHF Tripler/Driver Module

For uhf operation, the T20 Tripler/Driver Module is available to interface between the T40 Two Meter Exciter and the T80-450 Power Module. The T20 may also be used barefoot if desired for repeater or link operation.

Housed on a pc board 2 x 4 in., it requires about 150 mW drive at 2M to produce 150 mW output at 430-450 MHz. The T20 has four stages and operates on 13.6 Vdc at 80 mA.

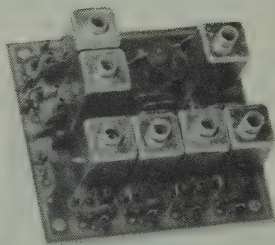


PRICES:

T20 Tripler/Driver Kit \$19.95

T20 Module Wired \$49.95

A13 Series Multichannel Adapters



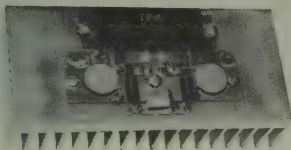
- A13-12 for 10-20 MHz xtals
- A13-45A for 38-55 MHz xtals
- For std HC-25/u plug-in xtals
- 50 ohm output
- 400-800 mV level
- For use with many types of transmitters, rcvrs, converters
- Ground activated diode crystal switching
- Individual trimmers
- 2-3/4 x 2-1/2 in pc board
- Operates on 13.6 Vdc

Kit price: \$13.95

Crystals: \$5.95 each

T80 Power Modules

COMPANION PA FOR T40 EXCITER



NO TUNING
VSWR PROTECTED
COMPLETELY STABLE
150 MW DRIVE
20 W MINIMUM OUTPUT ON VHF
13 W MINIMUM OUTPUT ON UHF

- Wired and tested — simply connect cables
- Uses state-of-the art hybrid power module ic
- VHF model covers 140-175 MHz
- UHF model covers 430-470 MHz
- Use on fm, cw, or ATV*
- No external tuned circuits required — built-in Chebichev filters for impedance matching and harmonic rejection
- Operate on 13.6 Vdc at 4 Amp
- Rated for CONTINUOUS DUTY
- Great for repeater service
- Heavy duty heat sink 2 x 5 x 2-1/2 inches
- May be supplied on panel to fit rear of A25 or A28 Cabinets
- Attenuator kits available at no cost for operation with excitors up to 2 Watts

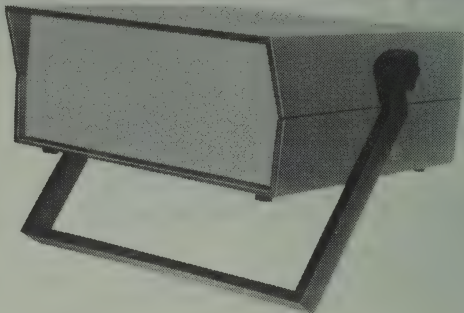
PRICES:

T80-150 RF Power Module for 140-170 MHz \$79.95

T80-450 RF Power Module for 430-470 MHz \$79.95

*See Nov 1975 article in 73 Magazine for HR-440 operation on ATV mode or request our application note #5.

Custom Equipment Cabinets



Molded cyclac shell, blue epoxy finish

Removable front & rear aluminum panels

Model A25: 7-3/4 W x 3-1/2 H x 7 D inches

Model A28: 7-3/4 W x 4-1/2 H x 7 D inches

FLEXIBLE MODULE MOUNTING PROVISIONS:

- * Vertical grooves for mounting pc boards or metal chassis panels
- * T40 Exciter and R70 Receiver designed to fit in vertical grooves in cabinet
- * T80 RF Power Module can be mounted on rear panel
- * Base has molded standoffs for horizontal board/panel mounting with 6-32 screws if desired
- * Odd sized modules can be mounted to optional chassis panels
- * Perforated front panel available for speaker mounting

NEW LOW PRICES!!!

A25 Cabinet, 3-1/2"H \$19.95

A28 Cabinet, 4-1/2"H \$23.95

Plastic handle/knob screw
kit \$1.00

Stainless steel mtg bracket and
knob screws kit \$3.00

3 x 7-7/16" Aluminum int.
chassis panel \$1.00

4 x 7-7/16" Aluminum int.
chassis panel \$2.00

Perforated front panel \$2.00

3 x 7-7/16" 1 or 2 sided
pc board panel \$1.00

TEST PROBE KITS



A versatile line of kits complete with probes, cable, components, and instructions. All you need supply is a connector to mate with test equipment. Kits feature a handy spring hook main probe and ground probe, with circuitry mounted on a terminal board within the probe body. Connections can be made easily to even the smallest components in circuits under test.

Price of each Probe Kit is \$9.95.

TE-3 RF PROBE

- * Use vtvm to align oscillators, multipliers, transmitters, etc.
- * Observe modulation waveforms
- * Good for relative measurements in range of 100 kHz to 500 MHz

TE-5 DC PROBE

- * Use with 11 meg input vtvm
- * For dc measurements up to 1kV
- * Internal 1 meg isolation resistor

TE-7 WIDEBAND DETECTOR PROBE

- * Troubleshoot video i-f circuits, etc. with oscilloscope
- * Range 20-50 MHz
- * Small loading, only 2 pf

TE-4 DIRECT PROBE

- * Direct connection to test equip.
- * For ac and ohms vtvm measurements

TE-6 BLOCKING PROBE

- * Connect signal generator or frequency counter to test circuit
- * Blocking capacitor inside probe
- * Use your choice of 3 capacitors in kit: 1 pf, 100 pf, or .001 uf

TE-8 LOW CAP/HI IMPEDANCE SCOPE PROBE

- * Minimizes waveform distortion
- * Wide frequency response
- * For video, sync, audio, agc, etc.
- * 10 pf and 1 meg in series w/probe

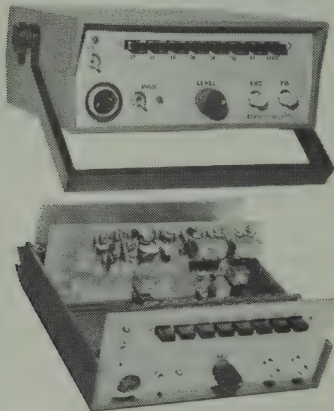
AA-10 2W Audio Amplifier Module

- IC speaker driver as used in our receivers
- Combine several receivers in one speaker/ amplifier
- Use with external switching as intercom, etc.
- Drive large speaker from HT
- Use internal or external volume control
- Low or high Z input
- 2 Watts audio output
- Drive 3.2 to 16 ohm speakers
- Compact 2 x 2-1/2 inch pcb
- 13.6 Vdc at 20-150 mA



Kit Price \$10.95

T85 FM Signal Generator



The T40 Exciter, with its adjustable output and eleven channels, makes an ideal basis for an fm signal generator to supplement other shop equipment in testing receivers in commercial applications. Adding a simple tone oscillator and cabinet with output connector and controls completes the project. The output may be calibrated against standards, and an external step attenuator can provide calibrated reference levels for sensitivity tests. Or a simple front panel control can be used for uncalibrated level adjustment. Complete information is available on request as application note #4.

To encourage construction, we offer a kit complete with T40 Exciter, TE-1 Tone Generator, A25 Cabinet, and the application note. This T85 Signal Generator Kit is priced at \$84.95. A vhf/uhf version, which includes the T20 Tripler/Driver Module, is \$104.95. (You supply controls, connectors, and wiring.) Crystals are available at \$5.95. Featured in Feb 1977 2 Way Dealer Magazine.

HOW TO ORDER

IN USA OR COUNTRIES OTHER THAN CANADA . . .

BY MAIL

- * Use order form in catalog or separate letter with similar information.
- * Send check or money order in US funds, or charge to your VISA (BankAmericard) or Mastercharge card.
- * Send order to HAMTRONICS, INC.; 182 Belmont Rd; Rochester, NY 14612; USA.

BY PHONE

- * Call 716-663-9254
- * Personal service 9-5 daily eastern time, including stock checks, price confirmation, and technical advise.
- * 24 hour electronic answering service evenings and weekends to take orders or catalog requests. You have as much time as you need on tape.
- * Use VISA, Mastercharge, or COD (add'l cost)

IN CANADA . . .

By Mail Order as above, and send to COMTEC; 5605 Westluxe Ave.; Montreal, Quebec H4W 2N3. Orders shipped from stock.

By Phone Use your credit card. Phone 514-482-2640, 9-9 daily, eastern.

Remittance Please remit in Canadian funds. Add 28% to prices shown to cover exchange rate, customs duty, and federal sales tax. Quebec residents, add provincial sales tax.

LIMITED WARRANTY

Hamtronics, Inc. warrants for 90 days all products manufactured by it to be free from defective material or workmanship under normal use and service. Our obligation is limited to repairing or replacing such product which proves to be defective by our examination. Kits assembled by the user are warranted as above for defective parts only, and warranty does not apply to parts damaged in construction or use. Hamtronics, Inc. in no way assumes liability for consequential damages and does not in any way assume to become a co-warrantor with any other manufacturer whose product it sells. Equipment of other manufacturers is covered by separate warranty of such manufacturers.

HAMTRONICS, INC.
182 Belmont Road
Rochester, NY 14612
Phone 716-663-9254



Name

Mailing Address

Complete St. Add. for UPS

City

State/ZIP

Quan

Model

Desc (Be sure to specify freq)

Price ea

Total

SHIPPING & HANDLING CHARGE: ➔

0-3 # \$2.00 (Most domestic kit orders)
 3-6 # \$3.00 (Small antennas, etc.)
 6-10 # \$4.00 (Transceivers, etc.)
 10-15 # \$5.00 (Power supplies, etc.)
 15-20 # \$6.00

For air service, double above rates.

Add \$1.00 for COD service.

Total Merchandise

Shipping and Handling

NYS Res Add 4% Sales Tax

Bal due or credit from prev ord

Remittance (US Funds)

TERMS: Check, money order, VISA, Mastercard,
or COD.

Please charge my ☐ VISA ☐ Mastercard

Card # _____ Expires _____

Signature _____

You can phone in your order 24
hours/7 days a week with our
electronic answering service.
For personal service, call 9-5.
Phone 716-663-9254. Use your
credit card or COD. Most orders
are shipped within hours after
receipt of order.

ANTENNA ROTORS, TRAPS, & BALUNS

* CDR Ham III Rotor with tower mtg base	\$139.95
* Mast mounting bracket for above (optional)	5.00
* CD-44 Rotor with tower and mast mtg bases	109.95
* AR-22XL Rotor	54.95

* Reyco KW-40 Traps, standard 5 band coils to provide 1 kW operation on 80-10M with 108 ft. length doublet.....	\$21.95/pr
* W2AU Balun, 1:1 balun unit for 1 kW, 50 ohms or 75 ohms, with stainless steel hardware, built-in lightning arrester	\$14.95
* Hy-Gain BN-86 balun, 1 kW, has boom mtg bkt for use on beams if desired, or can be hung under doublet.....	\$15.95

COAX, CONNECTORS, AND CABLE

As a convenience to our customers, we stock RG-8/U FOAM coax cable. We cut to any desired length. Price is 24¢/foot. Shipping weight is 10 lbs/100 ft.

HARD-TO-FIND CONNECTORS:

PL-259	UHF male for RG-8 cable	\$.95
UG-175	Adapter for above/RG-58	.39
CH-239	UHF female, chassis mt in 5/8" hole with nut	1.10
PL-258	UHF female/female splice	1.45
M-358	UHF T-connector	3.95
AF-59	F plug (tv, ht's, etc.)	.59
UG-88	BNC plug for RG-58/u	1.65
UG-255	BNC male to UHF female	3.60
UG-273	BNC female to UHF male	2.40
UG-625	BNC female chassis, 3/8 inch hole mt with nut	1.25



PL-259



UG-175



CH-239

PL-258



M-358



AF-59



UG-88



UG-255



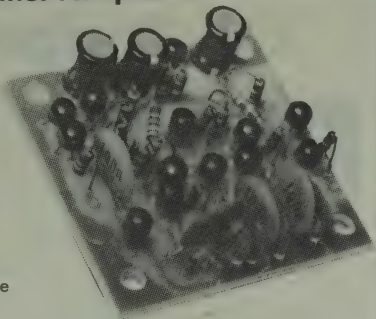
UG-273



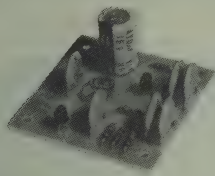
UG-625

★AS-10 Scanner Adapter★

- Dc switching circuits to scan up to 4 channels
- Link 2 for up to 8 channels
- Easy to construct and repair
- Uses discrete logic for low power drain
- Operates on 13.6 V/20 mA
- Jumbo LED indicators supplied
- General information provided to convert various oscillators
- Can scan fewer channels without skip by simple wiring change
- Provides +5Vdc output to osc
- Use simple xstr inverter for ground operated oscillators
- 2 x 2-1/8 inch G10 board



Price of kit \$12.95



TE-1 Audio Tone Oscillator

Ideal for modulation tests

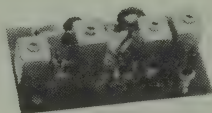
400 or 1000 Hz tone output

Output variable up to 1 Vrms

Operates on 13.6 Vdc/10 mA

2 x 2 inch G-10 pc board

Kit price \$9.95



T15 Receiver

Alignment Oscillator

Handy for weak signal source

Use standard 12 MHz xmit xtal

Harmonics useful on 6M, 2M,
220, 450, or com'l frequencies

Output variable over 20-30 dB
range with control on board

Use external variable attenuator
for more range or calib. steps

2 x 3 inch G-10 pc board

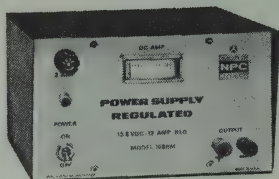
Operates on 13.6Vdc/30 mA

Kit price \$15.95

Crystals \$5.95

Rugged, Reliable

MODELS 108RA & 108RM



108RA ONLY \$69.95

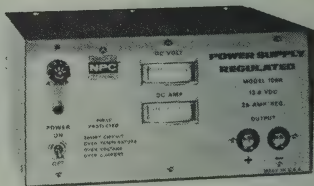
108RM ONLY \$84.95

- Heavy duty power supply for 25 W synthesized & ssb rigs or bench use
- 108RM includes meter and overvoltage protection
- 12 Amp intermittent
- 8 Amp Continuous
- Current foldback 2.5 Amp
- 4-1/4 x 7-1/2 x 5 inches
- Shipping weight 10 lb

MODEL 109R

"The Brute"

- For repeaters, big pa's, & bench use
- Four-way protection:
 - Short circuit
 - Over current
 - Over voltage
 - Over Temperature
- 25 Amp intermittent
- 10 Amp continuous
- 4-3/4 x 9 x 8-1/2 inches
- Shipping weight 15 lb



HARD TO BEAT!
ONLY \$129.95

NPC Power Supplies

- ★ CONSERVATIVELY DESIGNED
- ★ RATED FOR BOTH INTERMITTENT AND CONTINUOUS DUTY
- ★ LOW RIPPLE FOR HUM-FREE OPERATION
- ★ GOOD REGULATION 13.6 ± 0.2 VDC
- ★ OVERLOAD PROTECTION
- ★ ECONOMICAL - WIRED UNITS AT KIT PRICES
- ★ NEW LOW PRICES CAN'T BE BEAT! LESS THAN YOU'LL FIND ELSEWHERE - COMPARE!

MODEL 12CB4

- For rigs up to 5 Watts
- 2.5 Amp intermittent
- 1.5 Amp continuous
- Short circuit protected
- 3 x 4 x 5-1/4 inches
- Shipping weight 3 lb

ONLY \$24.95



MODEL 103R

- For rigs up to 15 Watts
- 4 Amp intermittent
- 2.5 Amp continuous
- Current foldback 1 Amp
- 3 x 4-3/4 x 5-3/4 inches
- Shipping weight 4 lb

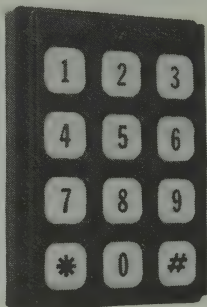
ONLY \$34.95

MODEL 104R

- For rigs up to 25 Watts
- 6 Amp intermittent
- 4 Amp continuous
- Current foldback 2 Amp
- 3-1/2 x 5-1/2 x 6 inches
- Shipping weight 6 lb

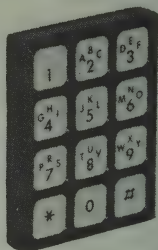
ONLY \$44.95

CES Tone Pads



Standard Model 210

2-7/8 x 2-1/4 x 7/16



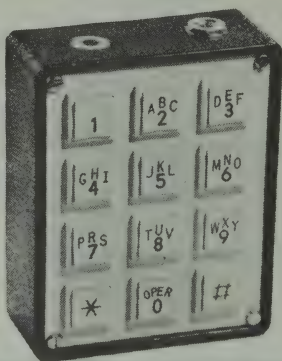
Miniature Model 215

2-3/8 x 1-11/16 x 3/8

either model

ONLY \$39.95

- * Crystal controlled * MOS digital IC, rf immune * Level & balance controls
- * Power applied only when key is depressed * Operates on 7-35V
- * Easily mounted * Manufactured by leading supplier of tone pads in US



Model 300

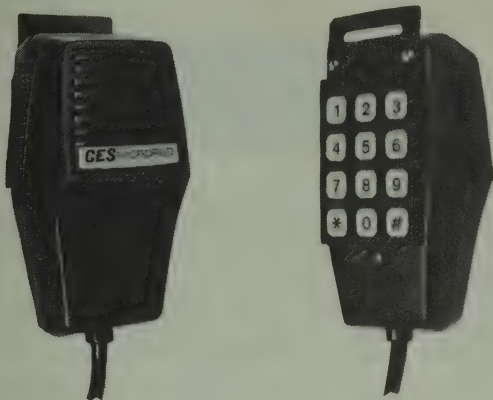
Acoustic/Direct

3-1/4 x 2-1/2 x 1-1/4

ONLY \$49.95

- * Powered by 9V battery
- * Rear mounted speaker can be held up to mic on rig
- * Can be plugged into rig through patch cord
- * Small enough to carry in pocket

*** CES Micropad Model 225**



- * 500 OHM DYNAMIC MIC WITH TT PAD**
- * SMALL SIZE 2 x 3-3/4 INCHES**
- * LED TONE GENERATION INDICATOR**
- * ADJUSTABLE LEVEL AND TONE BALANCE**
- * OPERATES ON 12 VDC FROM TRANSCEIVER**

*** LOW PRICE-ONLY \$44.95**



Hy-Gain 3750

SSB/CW Amateur Transceiver



The Hy-Gain 3750 is, unquestionably, an amateur transceiver of the highest possible quality. Outstanding performance at an entirely reasonable price makes this extraordinary model a truly remarkable value for the serious amateur radio operator. Spanning all amateur bands from 1.8 to 29.7 MHz, the 3750 utilizes advanced phase-lock-loop frequency circuitry to lock the first local oscillator with the VFO, providing direct injection into the first i-f at 9 MHz that incorporates a narrow band ssb crystal filter. This virtually eliminates receiver image and spurious response problems. Transmitted spurious signals also are reduced to the absolute minimum. Receiver intermodulation and cross modulation are enhanced through the use of dual-gate mos fet's at all critical rf amplifier and mixer stages. And a selectable rf attenuator permits tremendously strong signal handling capabilities. Other features include a noise blanker, vox, and sidetone circuits, just to name a few. The Hy-Gain 3750 is truly the finest amateur transceiver available, establishing its own state-of-the-art standards.

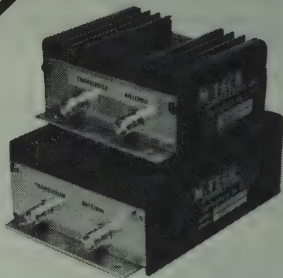
PRICES:	3750 Transceiver	\$1895.00
	3854 Speaker Console	59.95
	3855 Dual Frequency VFO	495.00

If you plan to purchase a new transceiver soon, let us send you a descriptive color brochure on this new rig! This is by far the finest set around — only for the most discriminating ham. If you decide to buy, we'll make you a great cash deal and ship it to your door!

hamtronics, inc.

182 BELMONT RD., ROCHESTER, NY 14612

FAMOUS M-TECH VHF PA'S



144-165 MHZ MODELS

P15A1 — \$64.95

1-3W input
12-25W output
13.6 Vdc at 2 Amp
100% duty cycle
Solid state switching

P50A10C — \$99.95

2-18W input
14-60W output
13.6 Vdc at 7 Amp
100% duty cycle
COR switching w/ LED indicator

P50A1 — \$139.95

1-3W input
40-65W output
13.6 Vdc at 8 Amp
85% duty cycle
COR switching w/ LED indicator

- Superb craftsmanship
- Solid state — latest designs
- Full One Year Warranty
- VSWR Protection
- Class C — fm/cw

220 MHZ MODELS

P30A10-220 — \$114.95

2-18W input
12-40 W output
13.6 Vdc at 8 Amp
100% duty cycle
COR switching w/ LED indicator

P30A1-220 — \$149.95

1-3 W input
30-45 W output
13.6 Vdc at 8 Amp
85 % duty cycle
COR Switching w/ LED indicator

Larsen Kulrod® Antennas

HIGH BAND UHF BAND QUARTER WAVE

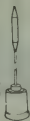
LM-150 for 144-174
or LM-220 for 220
Base Loaded - 3 db

Price \$23.85



LM-440
For 432-450
Collinear - 5 db

Price \$23.85



"Q" ANTENNA

For 136-512 MHz
(Cut as desired)

Price \$2.65



ANY ANTENNA ABOVE FITS ANY MOUNT BELOW!

MAGNETIC

Positive hold any
ferrous surface

MM-LM

Complete with
coax and
connector



Price
\$14.60

GUTTER

CLAMP

GC-LM

Complete
with coax
and
connector



Price \$14.60

TRUNK

GUTTER

AMB-K

Complete
with coax
and connector



Price \$9.10

TRUNK LID

TLM-LM

Complete
with
coax
and
connector



Price \$14.05

BODY MOUNT

Roof
Trunk/Fender

LM-K

Complete with
coax and
connector



Price \$6.35

3/4" Hole

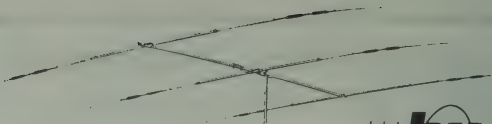


JM-K
Price
\$8.60

3/8" Hole

SAVE TIME & MONEY!

For a limited time, order the complete Larsen antenna and mount you choose, and we'll ship it to your door — free of shipping charges! Offer good only in 48 states.



/// **hy-gain**



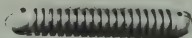
380



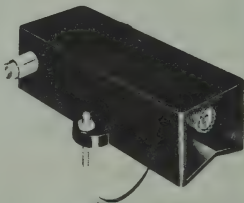
383



155



156



BN-86



18HT

14AVQ/WB

18AVT/WB



275



269



274

FREE Shipping on any Hy-Gain antenna in 48 states!

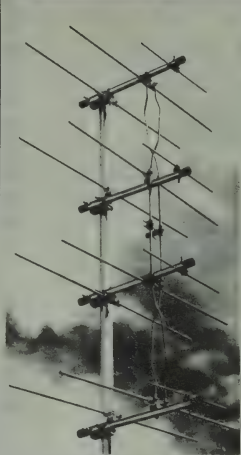
Request free Hy-Gain catalog for full specs.
Following are in stock. Others available
on special order.

<u>MODEL</u>	<u>DESCRIPTION</u>	<u>PRICE</u>
155	Doublet center insulator	\$5.95
156	Doublet end insulator, pair	3.95
182	18HT Hy-Tower stub vertical antenna	279.95
184	14RMK Roof mount kit for 14AVQ and 18AVT antennas	28.95
385	14AVQ trap vertical for 10-40 meters	67.00
386	18AVT trap vertical for 10-80 meters	97.00
221	TH3JR, 600 W tribander, 10-15-20M	144.50
229	LA-1 Lightning arrestor, heavy duty	44.95
242	BN-86 balun, 10-80M, 1 kW	15.95
269	Stud type 2M rubber duckie antenna	5.95
274	BNC type 2M rubber duckie antenna	9.00
275	UHF type 2M rubber duckie antenna	7.00
380	2BDQ 80-40M Trap doublet antenna	49.95
383	5BDQ 80-10M Trap doublet antenna	79.95
388	TH3-MK3 2kW, 3 element tribander	199.95
389	TH6-DXX 2kW, 6 element tribander	249.95

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SSB & MISC ANTENNAS



DX-120



A144-11

LAC-1



LAC-2



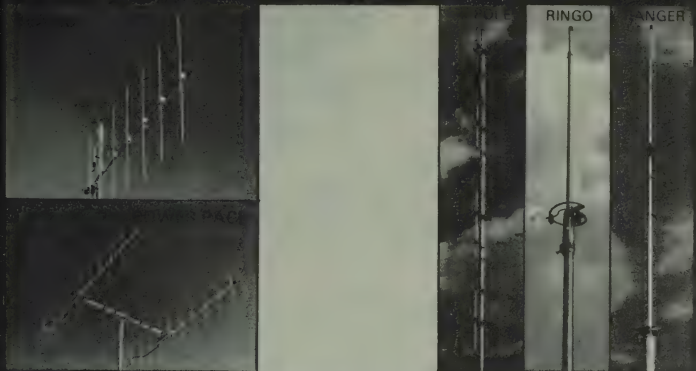
MODEL	DESCRIPTION	GAIN	SIZE	PRICE
CGPA	HD ground plane, 28-52 MHz	unity	5-8ft	\$40.00
A50-3	3 el, 6 meter beam	7.5dBd	72 in	32.95
A50-5	5 el, 6 meter beam	9.5dBd	144in	49.95
A144-7	7 el, 2 meter beam	11dBd	98in	21.95
A144-11	11 el, 2 meter beam	13dBd	144in	32.95
DX-120	20 el, 2 meter collinear	14dBd	118 H	42.95
DX1BN	Balun for above (optional)	-	-	12.95
A449-6	6 el, 430-450, end mount	11dBd	35in	21.95
A449-11	11 el, 430-450 MHz	13 dBd	60in	27.95
LAC-1	Blitz bug lightning arrester with male/female fittings	-	-	4.50
LAC-2	Blitz bug, female/female	-	-	4.50

**FREE Shipping on all Cushcraft antennas
in 48 states! Request complete catalog.**

FM ANTENNAS

146-220-440 MHz

by  **cushcraft**



MODEL	DESCRIPTION	GAIN	LENGTH	PRICE
A147-4	4 el, 2 meter, end mount	9dBd	44in	\$19.95
A144-7	7 el, 2 meters	11dBd	98in	21.95
A147-11	11 el, 2 meters	13dBd	144in	29.95
A147-22	22 el, 2 meters	16dBd	144in	84.95
A147-VPK	Kit to make 22 el from 2 11 el	-	-	29.95
A220-7	7 el, 220 MHz, end mount	11dBd	69in	21.95
A220-11	11 el, 220 MHz	13 dBd	102in	27.95
A449-6	6 el, 440 MHz, end mount	11 dBd	35in	21.95
A449-11	11 el, 440 MHz	13dBd	60in	27.95
A449VPK	Kit to make 22 el from 2 11 el	-	-	23.95
AR-6	6 meter Ringo	3.7dBw	96in	32.95
AR-2	2 meter Ringo	3.7dBw	50in	21.95
ARX-2	2 meter Ringo Ranger	6dBw	96in	32.95
ARX-2K	Conversion kit Ringo to Ranger	-	-	13.95
AFM-4D	2 meter 4 pole collinear	6 or 9dBd	23ft	59.95
ARX-220	Ringo Ranger for 220 MHz	6dBw	72in	32.95
ARX-450	440 MHz Ringo Ranger	6dBw	39in	32.95
AFM-44D	Four pole collinear for 440MHz	6or9 dBd	8ft	54.95

Popular OSCAR Twist Antennas



The twist has ten (or five) elements in the horizontal plane and ten (or five) elements in the vertical plane. It uses two redden matched driven elements and a simple coaxial phasing system to give horizontal or vertical polarization, left or right circular polarization, and axial polarization.

The phasing harness can be permanently mounted at the antenna with one 52 ohm coax feed line for a single mode of polarization. With the harness at the operating position and two 52 ohm coax feed lines, any mode of polarization can be selected.

Driven elements and phasing lines have standard coax fittings. The A147-20T is a special version of the twist antenna which has 10 elements vertically polarized for fm operation and 10 elements horizontally polarized for ssb/cw/am operation cut for the low end of the band. This version uses separate feed lines, or a relay can be installed at the antenna to change polarization.

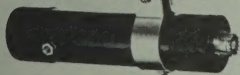
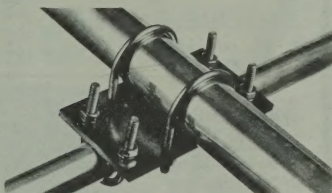
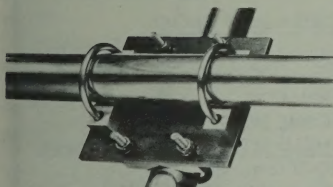
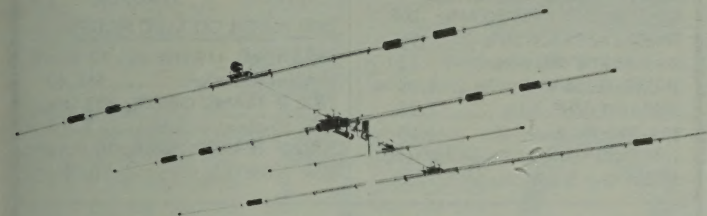
<u>MODEL</u>	<u>DESCRIPTION</u>	<u>GAIN</u>	<u>LENGTH</u>	<u>PRICE</u>
A144-10T	5 x 5, 144 MHz OSCAR	9.6dBd	70in	\$34.95
A144-20T	10 x 10, 144 MHz OSCAR	12.4dBd	144in	54.95
A147-20T	10 x 10, 146/144 MHz	12.4dBd	144in	54.95
A432-20T	10 x 10, 432 MHz OSCAR	12.4 dBd	57in	49.95

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FREE Shipping on Cushcraft antennas in
48 States. Request complete catalog.

LOOKING FOR A TRIBANDER? Consider the heavy duty Cushcraft ATB-34! Free shipping anywhere in 48 states.*



- * 3 Active elements each band
- * Full 2 kW P.E.P.
- * Wideband design
- * Balun included — no extras to buy
- * 7.5 dBd all bands
- * Heavy duty tubing & bkts
- * Rugged traps
- * Better performance than 3 element beams

ONLY \$239.95 *delivered

Hard to Find Components

All new, first quality components as used in our kits.



REPLACEMENT SEMI'S

SC-4/2N4123 NPN 200MHz	.75
2N3563 NPN 600 MHz	.75
2N4125 PNP 200 MHz	.75
2N5486/E304 VHF J-fet	1.00
J308 UHF/VHF J-fet	1.25
TBA-820 2W Audio IC	4.20
1N4148/1N914 Sil Diode 10/	1.00
1N281 Ger Signal Diode	.50



7801

7802/7803

7801 NB FM CERAMIC FILTER

455 kHz cf, ± 10 kHz bw, 70 dB adj
channel rejection.....\$18.60
7802 IF TRANSFORMER, 455 kHz,
3/8" single ct winding.... \$.75
7803 IF TRANSFORMER, 10.7 MHz,
3/8" 10K:1K..... \$1.00

7804 FEEDTHRU CAPACITOR

500 pF, as used in our kits...\$.75



7805 1 μ H RF CHOKE

as used in our kits..... \$1.00



7806 RF CHOKE WINDING KIT

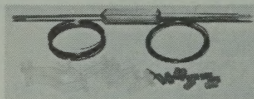
Contains 10 forms
of 1/4W resistor
size and ample
wire to make chokes up to 1 μ H.



\$2.00

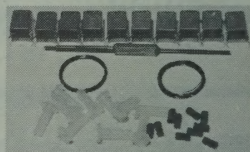
7807 COIL FORM, SLUG, SHIELD SET.

10-32 form, vhf
slug good for 10- 230 MHz,
1/2 x 1/2 x 3/4" shield. \$1.00/set



7808 MINIATURE COIL FORMS

6-32 x 1/2 inch coil form, high Q
vhf slug. Kit of 10 sets with a
supply of solderable wire and
tuning tool..... \$5.00/kit



7809 COIL FORM, SLUG, SHIELD.

Like #7807 above, 10-32 forms,
slugs, shields in kit of 10 sets with
supply of solderable wire and tuning
tool..... \$8.50/kit



7810 TUNING TOOL.

Standard type for 6-32 slot and 10-32 hex type slugs used in our kits..... \$.50/ea

VARIABLE CAPACITORS.

Premium quality milled plate air variable capacitors. Miniature, silver plated plates. Pc board vertical mount type.
7811 1-9 pF \$1.20 ea
7812 3-30 pF \$1.20 ea



7813 "AA" NI-CAD BATTERIES. Used in HT's. \$2.25 ea.



7814 PC BOARD MOUNTING

KIT. Contains 8 ea 4-40 screw, nut, lockwasher, and spacer. \$1.00/set



7815 1-10 PF MINIATURE CERAMIC TRIMMER CAP. 1/4 inch dia, vertical pc board mounting type. Excellent for vhf and uhf circuits. \$1.25/ea

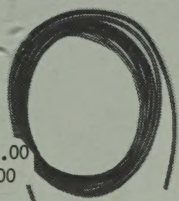


RG-174/U MINIATURE COAX CABLE.

Great for inter-module connections.

7816 Pkg 8 ft/\$1.00

7817 100ft/\$10.00



7818 PC MT PHONO JACKS. Ideal for short, direct connection in vhf & uhf circuits. 4/\$1.00



7820 TWO-POLE CRYSTAL FILTER. Monolithic type +7.5 kHz BW, 25-30 dB ultimate rejection. \$15.95



7819 PHONO PLUGS. Premium type, with cable clamp for termination of coax shields. 4/\$1.00



7821 9 MHZ CRYSTAL. 32 pF load crystal for various projects. HC-18/u wire leads. \$2.00



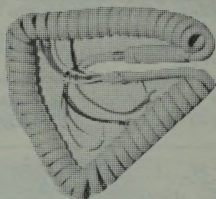
CERAMIC CAP ASST

5 each of popular values. \$2.95/kit
#7823: 0.39, 1, 2.2, 3, 3.9, 5, 6.8, 8.2
#7824: 10, 12, 15, 20, 33, 47, 100, 150 pF.
#7825 220, 270, .001, .01, .1 uF.



7822 4PDT MINIATURE TELEPHONE RELAY. 13.6Vdc coil. Great for T/R relays in vhf equipment. \$3.00





7826 TELEPHONE CORD. 4 wire,
tan, 5 ft., spade lugs. \$1.00

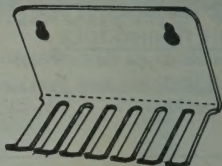
7827 TELEPHONE CORD. 4-wire,
tan, 15 ft long. \$3.95
(while supplies last)



7829 MINI-HOOK TEST CLIPS.

Easy hypodermic action for making test connections to even the smallest circuit leads. Pull off cap & attach hook up wire to make your own test leads. \$1.95/pr

7832 MINIATURE FERRITE TOROID CORE. For vhf/uhf baluns, transformers, chokes. 0.2"OD, .125"H, .1"ID hole. 6-1/2T wire on core gives 1000 ohm impedance at 20 MHz and above. 4/\$1.00



7828 TEST CABLE WALL BRACKET.

Nifty, 5-1/4" wide bracket has six 3" deep slots to hold your test leads neatly for easy selection. We've been using these for years, and we thought you might appreciate them too. Pleasant blue finish. \$2.95



RF POWER MODULE.

150 mW input. No tuning. \$59.95

- #7830 20-25W out, 140-175 MHz
- #7831 13-15W out, 430-470 MHz

7833 FERRITE BEADS

0.14"OD, 0.26"L, .043"hole. Twice the size of ordinary beads; like stringing two together! Great for vhf/uhf decoupling chokes. Strung on wire, gives 30 ohms at 20 MHz increasing to 60 ohms at 100 MHz & above. 10/\$1.00

hamtronics, inc.

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